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McGraw-Hill  
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Scientific and  
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Fifth Edition

On the c v r: Ph tomicrograph f crystals f vitamin B.  
(Dennis Kunkel, University of Hawaii)

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## McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, Fifth Edition

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# extrinsic sol

**semiconductor crystal**, in contrast to an intrinsic semiconductor, whose properties are characteristic of an ideal pure crystal. { 'ek'strinzik 'semi-kən,dəktər }

**extrinsic sol** [PHYS CHEM] A colloid whose stability is attributed to electric charge on the surface of the colloidal particles. { 'ek'strinzik 'säl }

**extrinsic variable star** [ASTRON] A variable star, such as an eclipsing variable, whose variation in apparent brightness is due to some external cause, rather than to actual variation in the amount of radiation emitted. { 'ek'strinzik ,verē'əbəl 'stär }

**extrophy** [MED] Malformation of an organ. { 'ek'strə'fē }

**extorse** [BIOL] Directed outward or away from the axis of growth. { 'ek'strōrs }

**extroversion** [BIOL] A turning outward. [PSYCH] The turning to things and persons outside oneself rather than to one's own thoughts and feelings. { 'ek'strə'vər-zhən }

**extrudate** [ENG] Ductile metal, plastic, or other semisolid material that has been shaped into a continuous form (such as fiber, film, pipe, or wire coating) by forcing the semisolid material through a die opening of appropriate shape. { 'ek'strə,dāt }

**extruder** [ENG] A device that forces ductile or semisolid solids through die openings of appropriate shape to produce a continuous film, strip, or tubing. { 'ed'strüd-ər }

**extrusion** [ENG] A process in which a hot or cold semisolid material, such as metal or plastic, is forced through the orifice of a die to produce a continuously formed piece in the shape of the desired product. [GEOL] Emission of magma or magmatic materials at the surface of the earth. [TEXT] A process for making continuous-filament synthetic fibers by forcing a syruplike liquid through minute holes of a spinneret. { 'ek'strü-zhən }

**extrusion billet** [MET] A slug of heated metal that is forced through a die by a hydraulic ram in direct extrusion operations. { 'ek'strü-zhən ,bil-ət }

**extrusion coating** [ENG] A process of placing resin on a substrate by extruding a thin film of molten resin and pressing it onto or into the substrates, or both, without the use of adhesives. { 'ek'strü-zhən ,kōd-īng }

**extrusion cooking** [FOOD ENG] The process by which moistened, expansible materials are plasticized in a tube by combination of moisture, heat, pressure, and mechanical shear. { 'ek'strü-zhən ,kük-īng }

**extrusion defect** [MET] Impaired flow of an extrusion product due to surface oxidation of the ingot or billet. { 'ek'strü-zhən di,fekt }

**extrusion ingot** [MET] A cylindrical casting used to form extruded products. { 'ek'strü-zhən ,īng-gət }

**extrusion metal** [MET] Any of numerous nonferrous metals, alloys, and other materials used in extrusion operations. { 'ek'strü-zhən ,med-əl }

**extrusion pressing** See cold extrusion. { 'ek'strü-zhən ,pres-īng }

**extrusive rock** See volcanic rock. { 'ik'strü-siv 'rāk }

**exudate** [MED] 1. A proteinaceous material that passes through blood vessel walls into the surrounding tissue in inflammation or a superficial lesion. 2. Any substance that is exuded. { 'ek-syü,dāt }

**exudation** See sweating. { 'ek-syü'dā-shən }

**exudation vein** See segregated vein. { 'ek-syü'dā-shən ,vān }

**exumbrella** [INV ZOO] The outer, convex surface of the umbrella of jellyfishes. { 'ek-səm'brel-ə }

**eye** [FOOD ENG] A hole formed in certain cheeses during ripening, such as in swiss cheese. [ZOO] A photoreceptive sense organ that is capable of forming an image in vertebrates and in some invertebrates such as the squids and crayfishes. { 'ī }

**eye assay** [MIN ENG] An estimate of the valuable mineral content of a core or ore sample as based on visual inspection. Also known as eyeball assay. { 'ī 'as,ā }

**eyeball** [ANAT] The globe of the eye. { 'ī,bōl }

**eyeball assay** See eye assay. { 'ī,bōl 'as,ā }

**eyeball potential** [PHYSIO] Very small electrical potentials at the eyeball surface resulting from depolarization of muscles controlling eye position. { 'ī,bōl pə'ten-chəl }

**eyebars** [DES ENG] A metal bar having a hole or eye through each enlarged end. { 'ī,bär }

**eyebolt** [DES ENG] A bolt with a loop at one end. { 'ī,bōlt }

**eye coal** [GEOL] Coal characterized by small, circular or elliptical structural disks that reflect light and are arranged in parallel planes either in or normal to the bedding. Also known as augen kohle; circular coal. { 'ī,kōl }

**eye-ear plane** [ANTHRO] In craniometric study, a position for placing a human skull so that the lower margins of the orbits and the upper margin of the auditory meatus are on the same horizontal plane. Also known as Frankfurt horizontal. { 'ī,ēr ,plān }

**eyeglasses** [OPTICS] Optical devices containing corrective lenses for defects of vision or for special purposes. { 'ī,glas-əs }

**eye lens** [OPTICS] The lens in a two-lens eyepiece which is nearer to the eye. { 'ī,leŋz }

**eyelet** [DES ENG] A small ring or barrel-shaped piece of metal inserted into a hole for reinforcement. { 'ī,lət }

**eyeletting** [ENG] Forming a lip around the rim of a hole. { 'ī,ləd-īng }

**eyelid** [ANAT] A movable, protective section of skin that covers and uncovers the eyeball of many terrestrial animals. { 'ī,lid }

**eyelights** [GRAPHICS] Low-intensity light sources used to add sparkle to the eyes or teeth and reduce shadows on the face; usually placed at eye level. { 'ī,līts }

**eye of the storm** [METEOROL] The center of a tropical cyclone, marked by relatively light winds, confused seas, rising temperature, lowered relative humidity, and often by clear skies. { 'ī,əv θə 'stōrm }

**eye of the wind** [METEOROL] The point or direction from which the wind is blowing. { 'ī,əv θə 'wind }

**eyepiece** [OPTICS] A lens or optical system which offers to the eye the image originating from another system (the objective) at a suitable viewing distance. Also known as ocular. { 'ī,pēs }

**eyepoint** [OPTICS] That point on the axis of a lens at which the brightest and sharpest visual image is obtained. { 'ī,pōint }

**eye scanning** [IND ENG] Scanning of the visual field by moving the eyeballs without rotation of the head. { 'ī,skan-īng }

**eye screw** [DES ENG] A screw with an open loop head. { 'ī,skrü }

**eye socket** See orbit. { 'ī,sāk-ət }

**eyespot** [BOT] 1. A small photosensitive pigment body in certain unicellular algae. 2. A dark area around the hilum of certain seeds, as some beans. [INV ZOO] A simple organ of vision in many invertebrates consisting of pigmented cells overlying a sensory termination. [PL PATH] A fungus disease of sugarcane and certain other grasses which is caused by *Helminthosporium sacchari* and characterized by yellowish oval lesions on the stems and leaves. { 'ī,spāt }

**eyestalk** [INV ZOO] A movable peduncle bearing a terminal eye in decapod crustaceans. { 'ī,stōk }

**eye wall** [METEOROL] A zone at the periphery of the eye of the storm where winds reach their highest speed. { 'ī,wōl }

**Eyckman formula** [OPTICS] An empirical formula which relates the molar refraction of a liquid at a given optical frequency to its index of refraction, density, and molecular weight. { 'īk-mən ,fōr-myə-lə }

**Eyring equation** [PHYS CHEM] An equation, based on statistical mechanics, which gives the specific reaction rate for a chemical reaction in terms of the heat of activation, entropy of activation, the temperature, and various constants. { 'ī,riŋ ,ī,kwā-zhən }

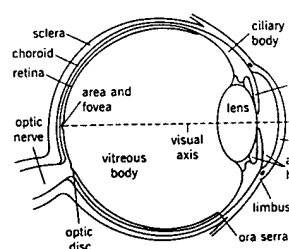
**Eyring formula** [FL MECH] A formula, based on the Eyring theory of rate processes, which relates shear stress acting on a liquid and the resulting rate of shear. { 'ī,riŋ ,fōr-myə-lə }

**Eyring molecular system** [FL MECH] Theory to account for liquid properties; assumes that each liquid molecule can move freely within a certain free volume. Also known as Eyring theory. { 'ī,riŋ mē'lek-yə-lər ,sis-təm }

**Eyring theory** See Eyring molecular system. { 'ī,riŋ ,thē-ə-rē }

**E zone** [COMMUN] One of the three zones into which the earth is divided to show the variations of the F<sub>2</sub> layer in respect to longitude when one is making frequency predictions; it roughly covers Asia, Australia, the Philippines, and Japan. { 'ē ,zōn }

EYE



Cross section of human eye.